

ABSTRACT

Disclosed is a recombinant enzyme which can convert cephalosprin C into glutaryl-7-aminocephalosprin acid in a bioreactor at a high yield. A bacterial hemoglobin (*Vitreoscilla* hemoglobin) gene and a D—amino acid oxidase gene are fused to each other by PCR and the
5 fused DNA fragment is cloned and express in *E.coli*. In a bioreactor, the recombiant enzyme VHb-DAAO can sufficiently supply oxygen as an electron acceptor by virtue of the fused hemoglobin, thereby showing an excellent capability of converting cephalosporin C.